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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/671,034	09/25/2003	Thomas A. Wynn	22058-519 CIP DIV2	6681

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EXAMINER	
HAMUD, FOZIA M	

ART UNIT	PAPER NUMBER
1647	

DATE MAILED: 04/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/671,034	WYNN ET AL.	
	Examiner	Art Unit	
	Fozia M. Hamud	1647	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 October 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *13,16-21,24-28 and 31-50* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *13, 16-21, 24-28, 31-50* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *10/24/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1a. Receipt of Applicants' preliminary amendment filed on 23 September 2003 is acknowledged.

1b. Claims 1-12, 14-15, 22-23 and 29-30 have been cancelled, new claims 31-50 have been added. Thus claims 13, 16-21, 24-28 and 31-50 are pending and under consideration.

1c. It is acknowledged that the specification has been amended to delete references to figures and drawings, since the instant application contains no drawings.

Information Disclosure Statement:

2. The information disclosure statement (IDS) submitted 24 October 2005 was received and complies with the provisions of 37 CFR §§1.97 and 1.98. It has been placed in the application file and the information referred to therein has been considered as to the merits.

Claim rejections-35 USC § 112: First Paragraph

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3a. Claims 13, 16-21, 24-28 and 31-50 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claims contain subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to practice the invention.

The instant claims 13, 16-21, 24-28 and 31-50 are drawn to a method of treating or inhibiting formation of tissue fibrosis in a mammalian subject by administering a therapeutically effective amount of an IL-13 antibody or an IL-13 binding fragment of an antibody to IL-13. Claims 16-20, 24-28 add the limitations of affected tissues. New claims 32-50 recite specific dosages and modes of administration.

The instant specification discloses that IL-13 is the major Th2 cytokine driving type 1 and type III collagen mRNA production and hepatic fibrosis in infected mice, (see page 32, lines 25-27). The specification, therefore, asserts that an IL-13 inhibitor/antagonist can be of therapeutic benefit in preventing fibrosis, such as, for example, that associated with chronic infectious, (page 32, lines 27-30). The prior art at the time of filing also recognized that IL-13 is a profibrotic molecule and the chronic expression of IL-13 leads to the enhanced accumulation of collageneous material in the subepithelial and adventitial regions of the airway, (see Zhu et al., cited on the IDS filed on 10/24/2005, The Journal of Clinical Investigations, Vol. 103, No. 6, pages 779-787, especially page 785, bottom of column 1). Therefore, the role IL-13 plays in the formation of tissue fibrosis is well established. However, the specification fails to disclose the therapeutic administration of antibodies that bind to IL-13 for treating or inhibiting formation of tissue fibrosis. Furthermore, the specification does not enable the administration of an antibody or antibody fragment to IL-13 is used to treat the affected tissues recited in 16-20, 24-28. Although there are several antibody therapeutics that are currently on the market, these antibodies have been

extensively studied in terms of their efficacy as well as toxicity. See E. Choy (see page E. Choy, Cytokine, Vol.28, pages 158-161, 2004, especially page 160, bottom of column 1), who discloses that patients receiving infliximab (recmicade, an anti-TNF antibody) had higher incidence of infections, in particular tuberculosis, and also patients with congestive cardiac failure had serious side effects, even death in some instances.

The criteria set forth in Ex parte Forman (230 USPQ 546 (Bd. Pat. App. & Int. 1986), and reiterated in In re Wands (858 F.2d 731, 737, 8 USPQ2d 1400, 1404 (Fed. Cir. 1988)), which include (1) the quantity of experimentation necessary, (2) the amount of direction or guidance presented, (3) the presence or absence of working examples, (4) the nature of the invention, (5) the state of the prior art, (6) the relative skill of those in the art, (7) the predictability or unpredictability of the art and (8) the breadth of the claims, is the basis for determining undue extermination. In the instant case, the safety and efficacy of administering an antibody or antibody fragment to IL-13 to a mammal, to treat or inhibit formation of tissue fibrosis is unpredictable. There is no guidance in the specification as to how the antibodies to be used in the claimed method were generated, for example, there is a chance that the mammal might develop a response against these antibodies, if they were generated in a mammal other than the one being administered. Therefore, the lack of guidance in the specification, the complex nature of the invention coupled with the state of the prior art, which establishes that using antibodies as therapeutics is a very complex endeavor, renders the claimed invention nonenabling. The state of the

art acknowledges that potential use of antibodies as therapeutics is very promising, however, careful studies using relevant *in-vivo* models must be performed to properly evaluate efficacy as well as safety of the antibodies, (see Borrebaeck et al. Current Opinion in Pharmacology, Vol.1, pages 404-408, 2001, especially pages 406 and 407). Borrebaeck et al. teach that although antibody-based therapy in autoimmune diseases, asthma and cancer is quite impressive, adverse effects due to antibody treatment was quite high, (see page 405, bottom of column 1). Therefore, given the current state of antibody based therapy, the mere assertion that an IL-13 inhibitor/antagonist can be of therapeutic benefit in preventing fibrosis, does not enable the claimed method. In the instant case, Applicants do not teach how the antibodies to be used in the claimed method are generated, whether the doses recited in claims 39-40 and 49-50 are safe and/or effective, whether continuous administration of said antibody or fragment for 12 to 24 hours as recited in claims 38 and 48 is safe. Neither does the specification establish that any of the tissues or conditions recited in claims 16-19 and 24-28 have been treated using an antibody to IL-13 or an IL-13 binding fragment of an antibody to IL-13.

Accordingly, the disclosure that IL-13 plays a role in formation of tissue fibrosis, does not enable claims drawn to a method of treating or inhibiting formation of tissue fibrosis in a mammal by administering an antibody to IL-13 or an IL-13 binding fragment of an antibody to IL-13.

Conclusion:

4. No claim is allowed.

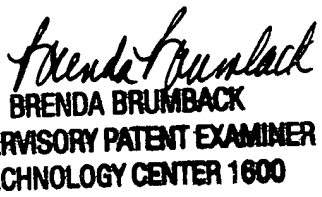
Advisory Information:

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fozia M. Hamud whose telephone number is (571) 272-0884. The examiner can normally be reached on Monday, Thursday-Friday, 6:00 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brenda G. Brumback can be reached on (571) 272-0961. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Fozia Hamud
Patent Examiner
Art Unit 1647
31 March 2006



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